

The invention relates to a method for evaporating a solution and an evaporator applied to it. The evaporator (1) comprises parallel plate heat exchanger elements (3) fitted inside a jacket (2), consisting of a flexible plastic film, for example, and a liquid distribution space (4) common to the elements, from where the solution to be evaporated can be spread, through supply channels (6), on the heat transmission surfaces (4) of the elements to run from the top downwards. The solution (10) that has not evaporated on the surfaces is recycled from the bottom of the evaporator back to the liquid distribution space, and from there to the heat transmission surfaces (4) of the elements for re-evaporation. In connection with evaporation, precipitate is separated from the solution as a result of over-saturation, ending up in the recirculation flow with the solution and, according to the invention, being separated from the solution in the liquid distribution space (14) that works as a separator for the precipitate. The recirculation flow is fed into the space (14) so that the precipitate in it is separated under the effect of its weight and/or kinetic energy, while the flow of the solution is directed upwards, ending up in the supply channels (6) leading to the heat transmission surfaces (4) of the elements. The space (14) can consist of an elongated duct, the flow being fed to its end from a downward curving recirculation line, or the space can consist of a trough, which is provided with lamellas (16) or a perforated intermediate bottom, which separate the precipitate.